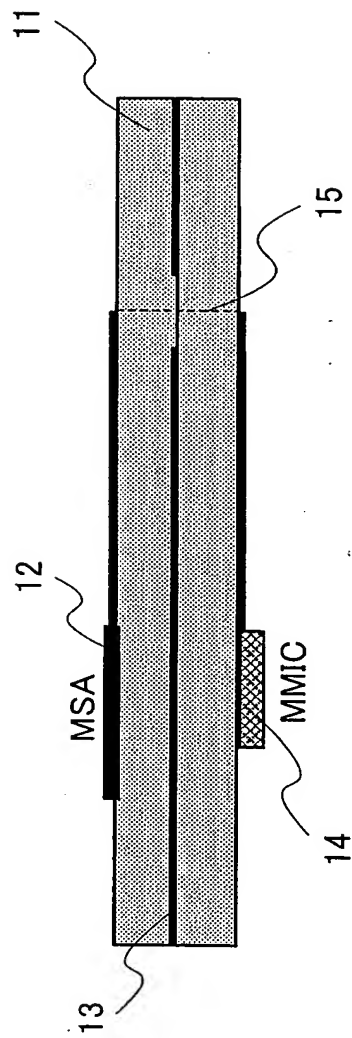


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PRIOR ART

FIG.1

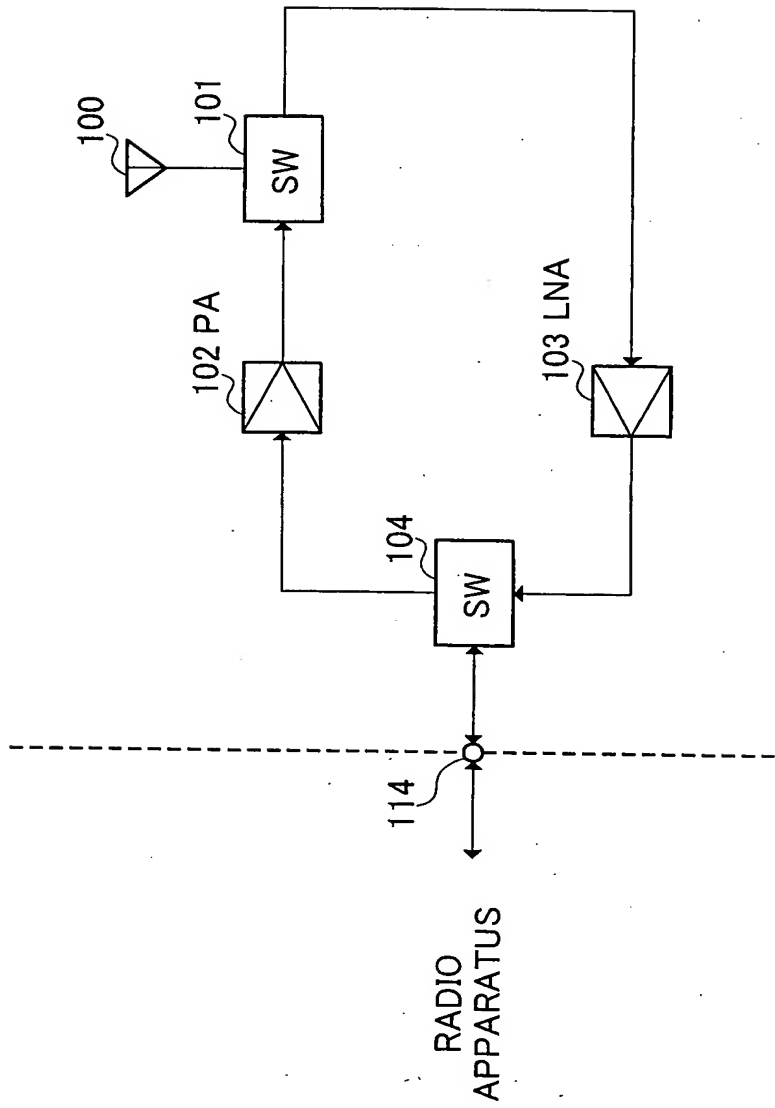


FIG.2

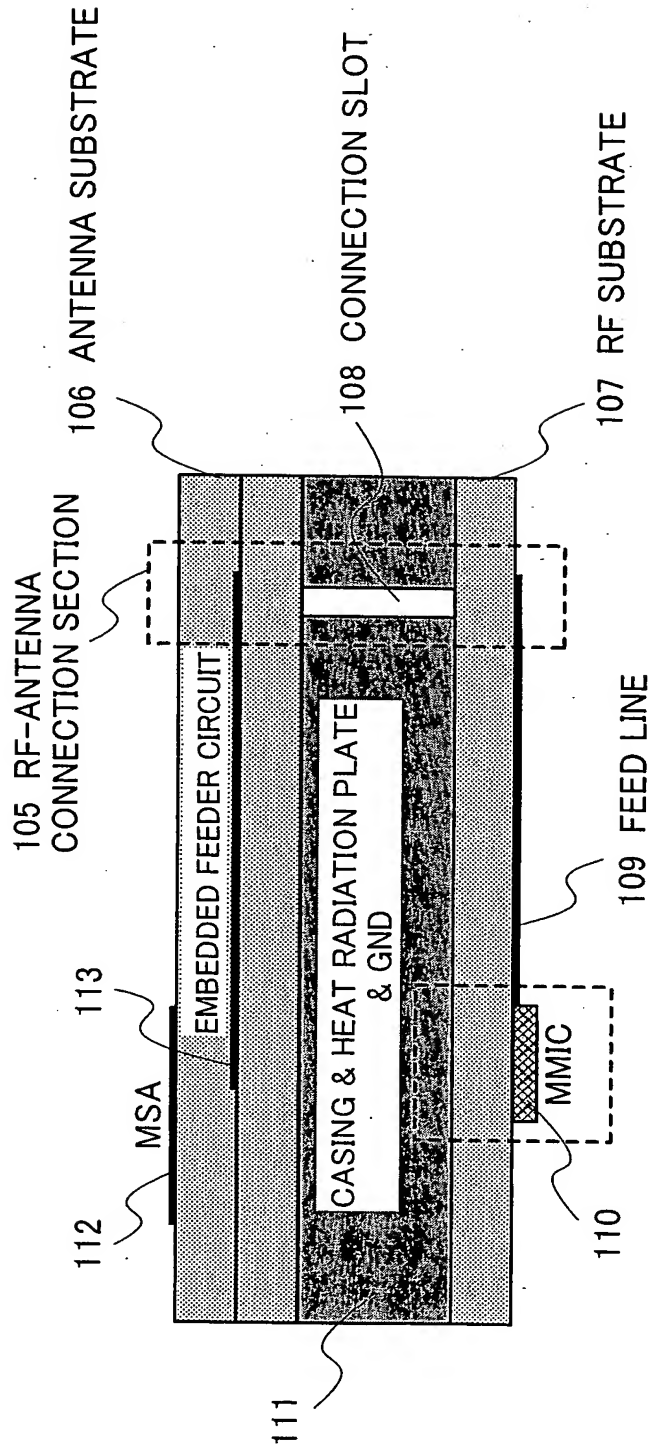


FIG.3

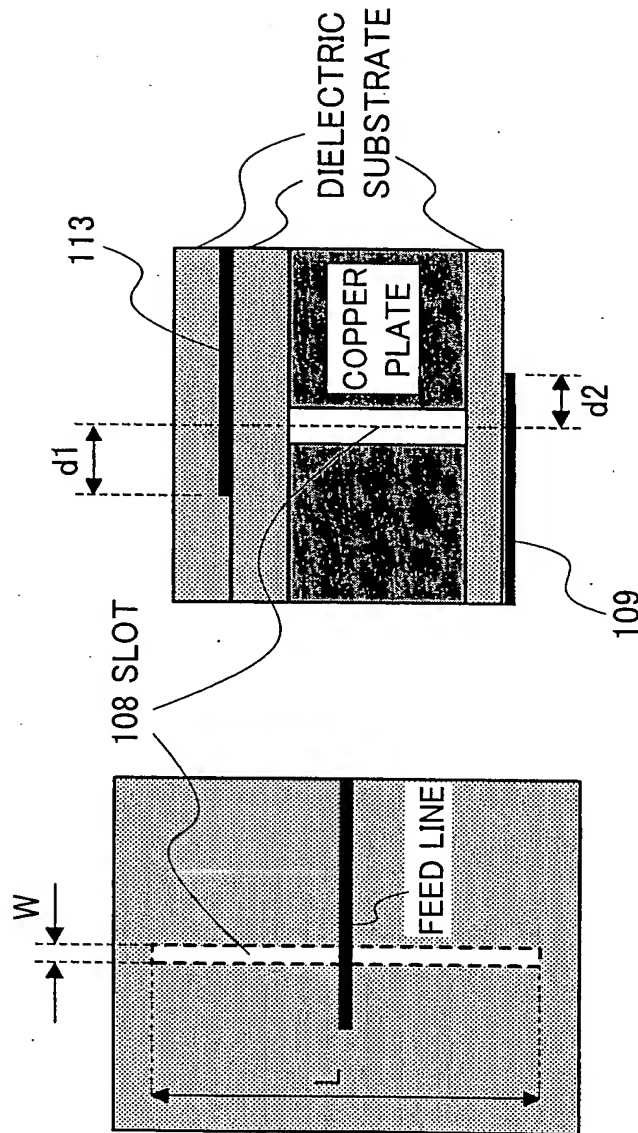


FIG. 4A

FIG. 4B

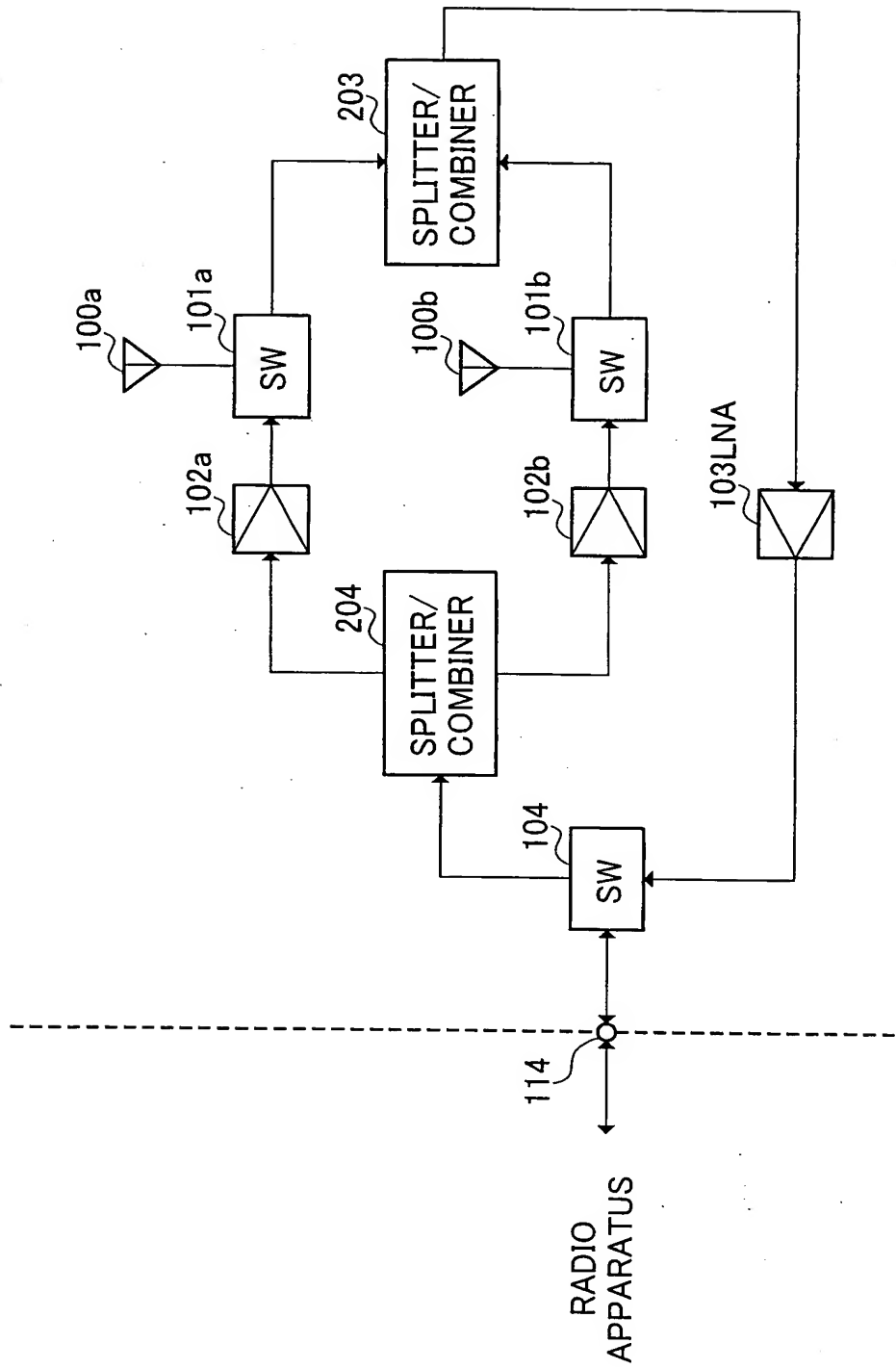


FIG.5

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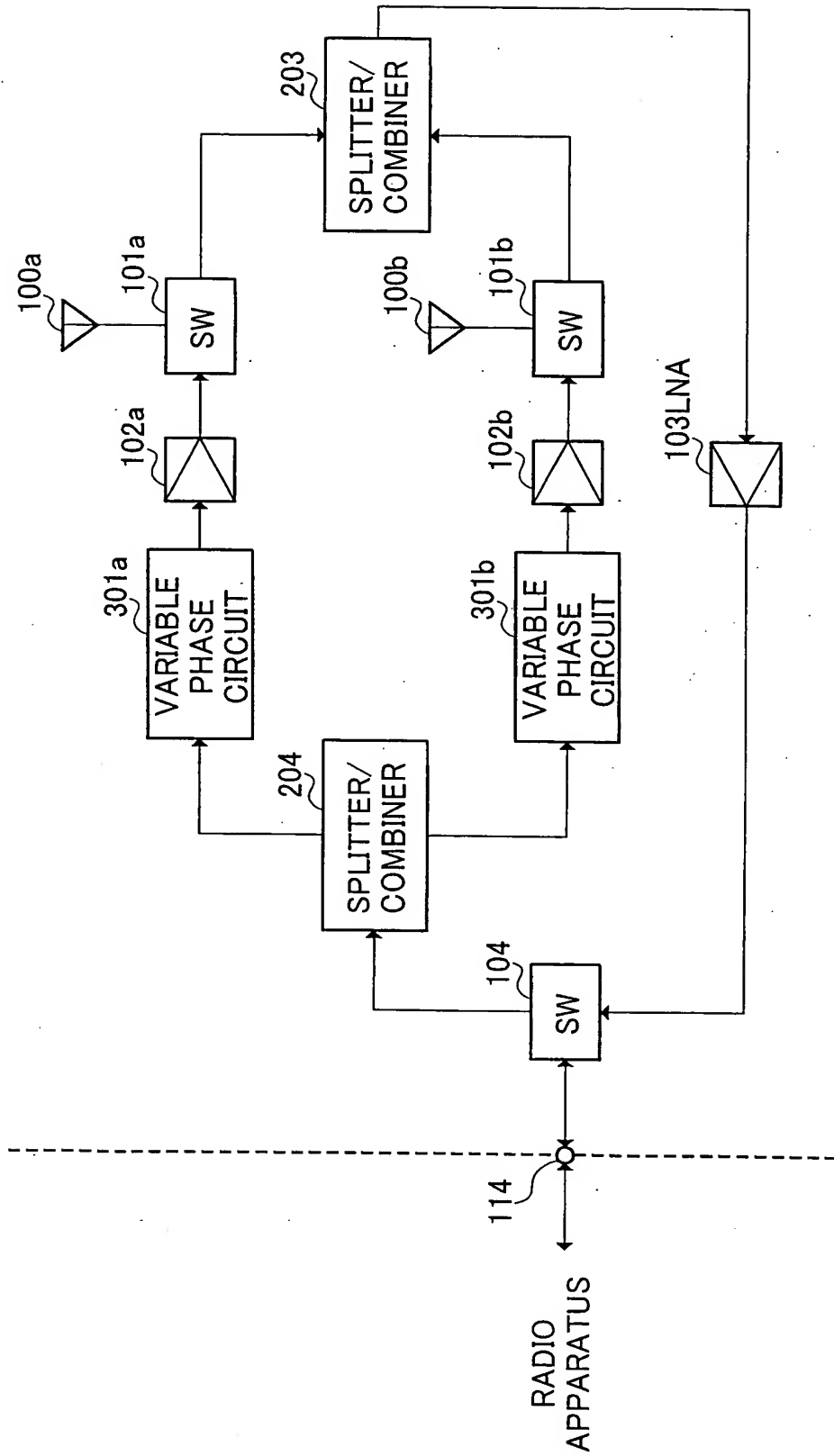


FIG.6

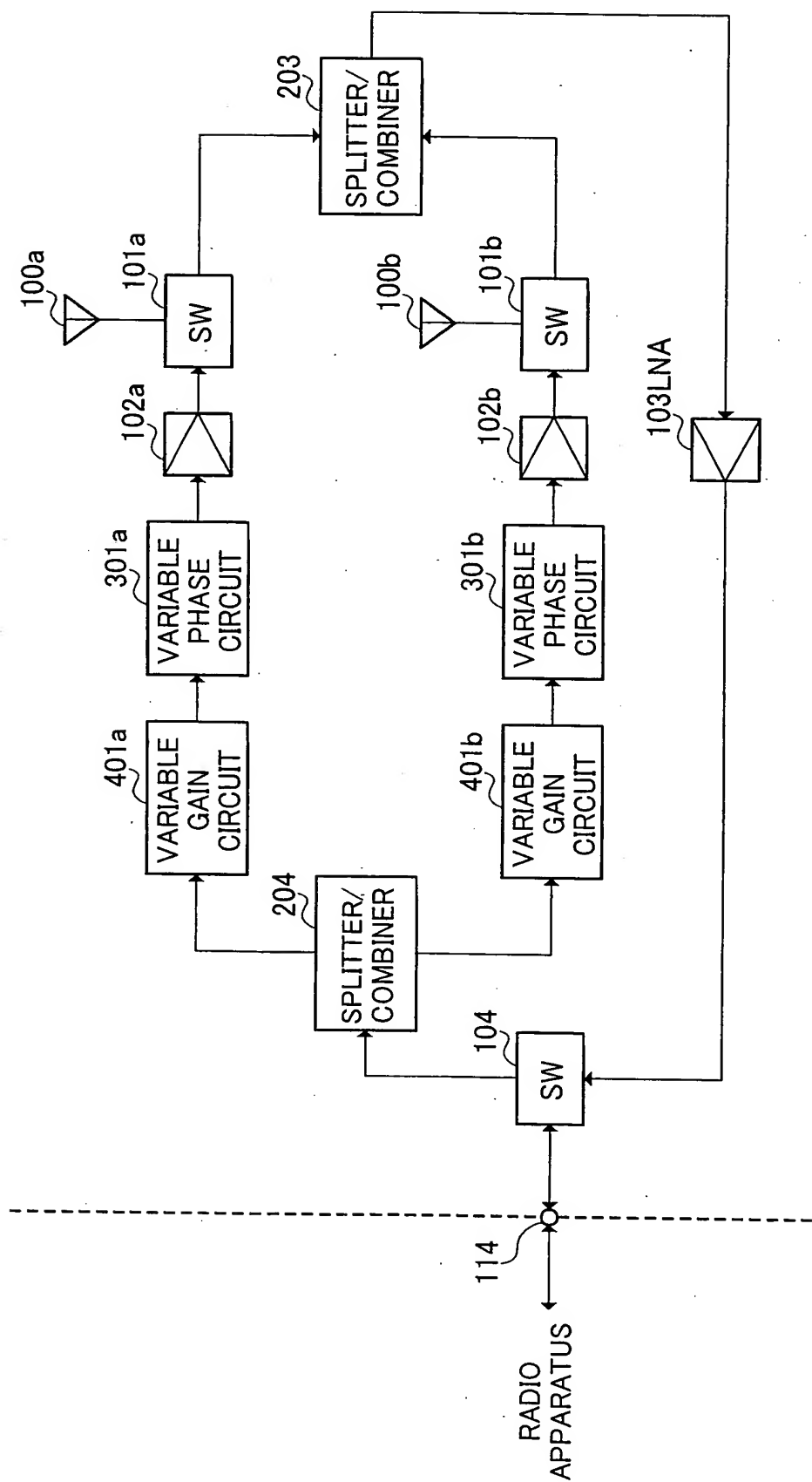


FIG. 7

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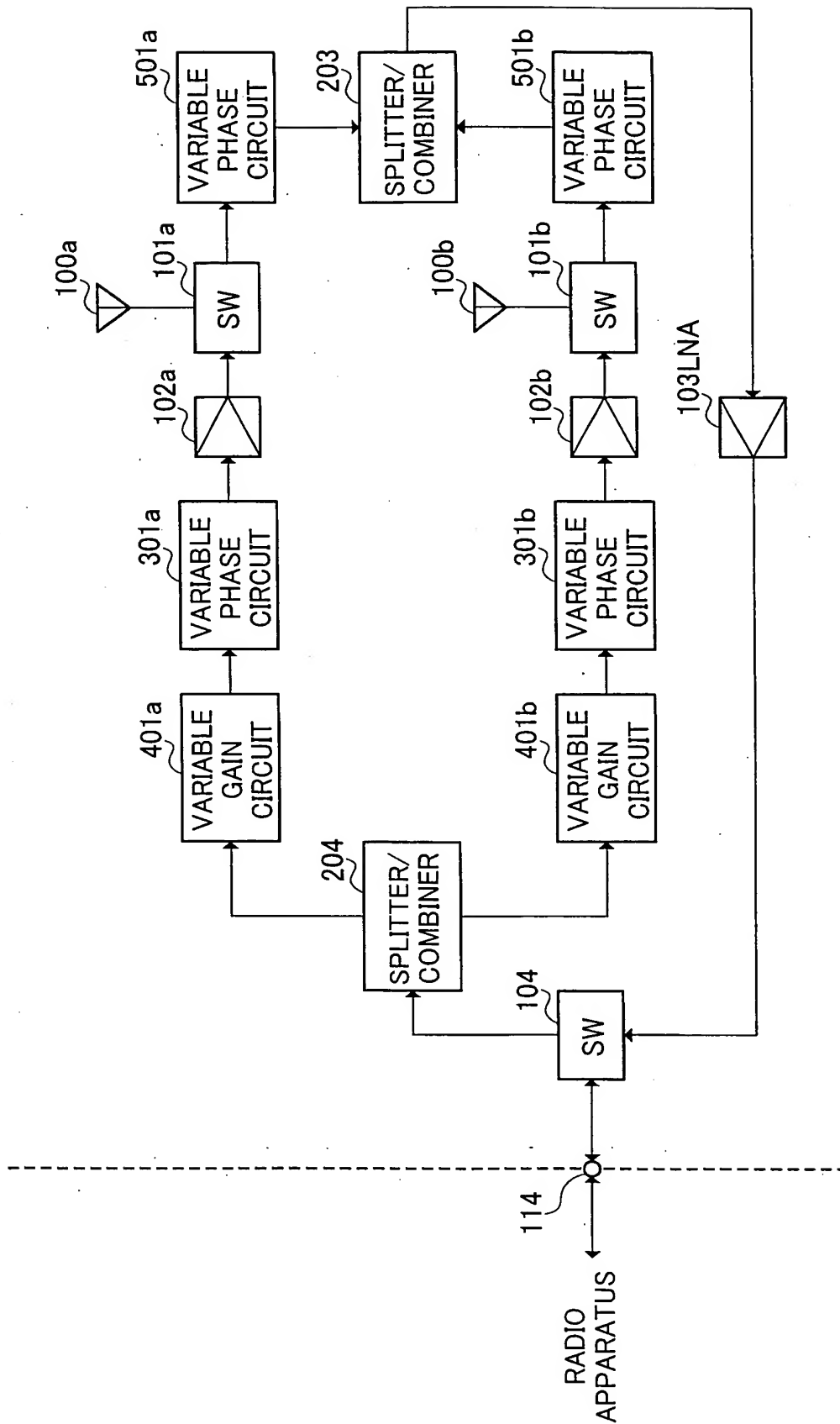


FIG. 8

[FIG.2]

RADIO APPARATUS

[FIG.3]

5 105 RF-ANTENNA CONNECTION SECTION
106 ANTENNA SUBSTRATE
113 EMBEDDED FEEDER CIRCUIT
111 CASING & HEAT RADIATION PLATE & GND
108 CONNECTION SLOT
10 109 FEED LINE
107 RF SUBSTRATE

[FIG.5]

RADIO APPARATUS

15 204 SPLITTER/COMBINER
203 SPLITTER/COMBINER

[FIG.6]

RADIO APPARATUS

20 204 SPLITTER/COMBINER
301a VARIABLE PHASE CIRCUIT
301b VARIABLE PHASE CIRCUIT
203 SPLITTER/COMBINER

25 [FIG.7]

RADIO APPARATUS

204 SPLITTER/COMBINER
401a VARIABLE GAIN CIRCUIT

401b VARIABLE GAIN CIRCUIT
301a VARIABLE PHASE CIRCUIT
301b VARIABLE PHASE CIRCUIT
203 SPLITTER/COMBINER

5

[FIG. 8]

RADIO APPARATUS

204 SPLITTER/COMBINER

401a VARIABLE GAIN CIRCUIT

10 401b VARIABLE GAIN CIRCUIT

301a VARIABLE PHASE CIRCUIT

301b VARIABLE PHASE CIRCUIT

501a VARIABLE PHASE CIRCUIT

203 SPLITTER/COMBINER

15 501b VARIABLE PHASE CIRCUIT